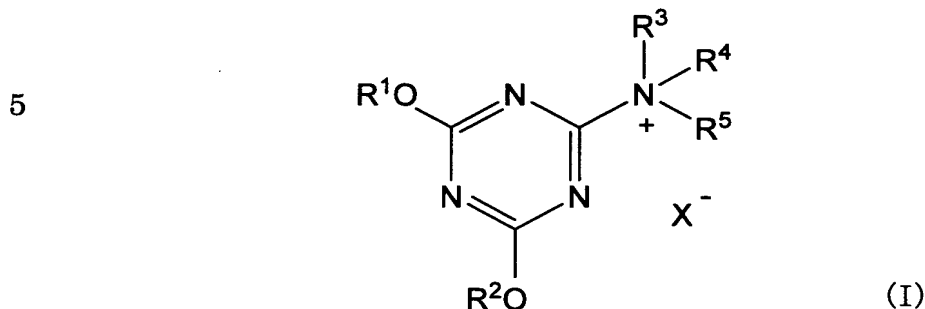


CLAIMS

1. A 1,3,5-triazine compound represented by the following formula I:

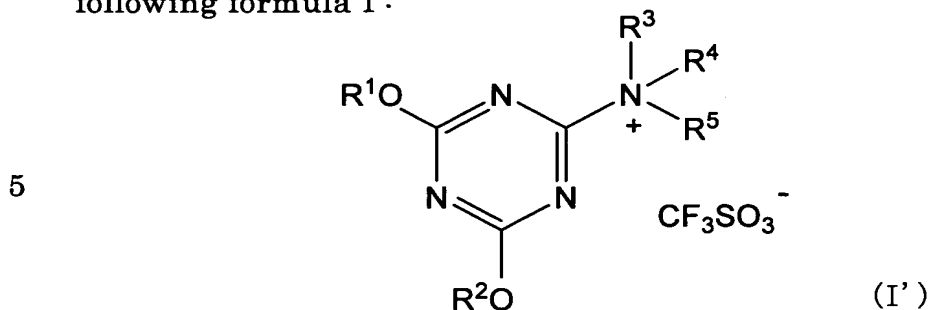


wherein R¹ and R² are each independently a methyl group, an ethyl group, a hydroxyalkyl group having 2 to 5 carbon atoms, -(CH₂CH₂O)_mR⁶ (where m is an integer of 1 to 120, and R⁶ is a hydrogen atom, a methyl group, an ethyl group, or a propyl group), -(CH₂CH₂NR⁷)_mH (where m is an integer of 1 to 120, and R⁷ is an alkyl group having 2 to 5 carbon atoms, an N,N-dialkylaminoethyl group or -CH₂CH₂N⁺(CH₃)₃, -CH₂CH₂SO₃⁻, -CH₂CH₂N⁺(CH₃)₃, or an alkyl group having 6 to 20 carbon atoms, but both R¹ and R² are not alkyl groups having 6 to 20 carbon atoms at the same time; one or two of R³, R⁴ and R⁵ are methyl groups, and the remaining R³, R⁴ and R⁵ are each independently -CH₂COO-C_nH_{2n+1}, -C_nH_{2n+1}, or -C₆H₄-p-C_nH_{2n+1}, where n is an integer of 6 to 20, and -C_nH_{2n+1} is linear; and X⁻ is a halide ion, a triflate anion, a nitrate ion, a sulfate ion, a hydrogensulfate ion, a sulfonate ion, a tetrafluoroborate ion, or a perchlorate ion.

2. The compound of claim 1, wherein at least one of R¹ and R² is a methyl group or an ethyl group.

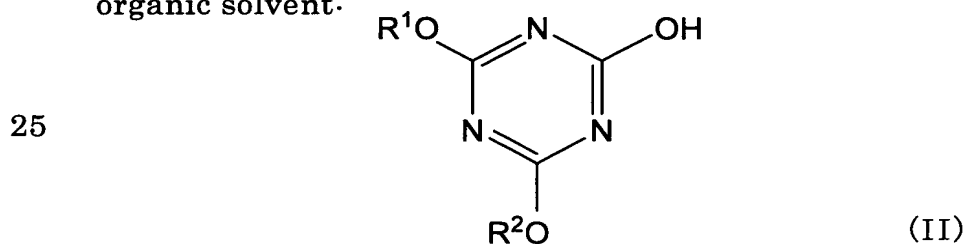
3. The compound of claim 1 or 2, wherein n is 12 to 16.

4. A method for producing a 1,3,5-triazine compound represented by the following formula I':

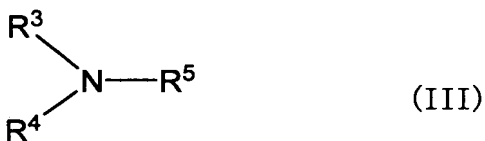


wherein R¹ and R² are each independently a methyl group, an ethyl group, a hydroxyalkyl group having 2 to 5 carbon atoms, 10 -(CH₂CH₂O)_mR⁶ (where m is an integer of 1 to 120, and R⁶ is a hydrogen atom, a methyl group, an ethyl group, or a propyl group), -(CH₂CH₂NR⁷)_mH (where m is an integer of 1 to 120, and R⁷ is an alkyl group having 2 to 5 carbon atoms, an N,N-dialkylaminoethyl group or -CH₂CH₂N⁺(CH₃)₃, -CH₂CH₂SO₃⁻, -CH₂CH₂N⁺(CH₃)₃, or an alkyl group 15 having 6 to 20 carbon atoms, but both R¹ and R² are not alkyl groups having 6 to 20 carbon atoms at the same time; one or two of R³, R⁴ and R⁵ are methyl groups, and the remaining R³, R⁴ and R⁵ are each independently -CH₂COO·C_nH_{2n+1}, -C_nH_{2n+1}, or -C₆H₄-p-C_nH_{2n+1}, where n is an integer of 6 to 20, and -C_nH_{2n+1} is linear; and X⁻ is a triflate anion, 20 comprising:

obtaining triflate by mixing a compound represented by the following formula II and trifluoromethanesulfonic anhydride in an organic solvent:

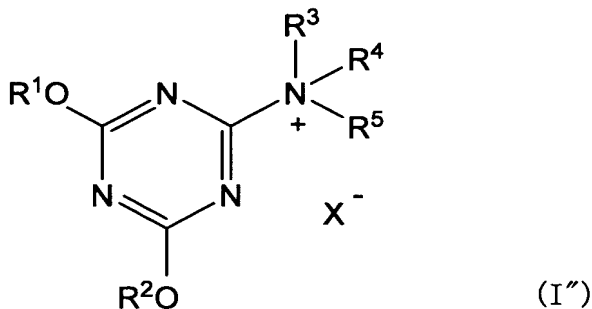


wherein R^1 and R^2 are each independently a methyl group, an ethyl group, a hydroxyalkyl group having 2 to 5 carbon atoms, $-(CH_2CH_2O)_mR^6$ (where m is an integer of 1 to 120, and R^6 is a hydrogen atom, a methyl group, an ethyl group, or a propyl group),
 5 $-(CH_2CH_2NR^7)_mH$ (where m is an integer of 1 to 120, and R^7 is an alkyl group having 2 to 5 carbon atoms, an N,N-dialkylaminoethyl group or $-CH_2CH_2N^+(CH_3)_3$, $-CH_2CH_2SO_3^-$, $-CH_2CH_2N^+(CH_3)_3$, or an alkyl group having 6 to 20 carbon atoms, but both R^1 and R^2 are not alkyl groups having 6 to 20 carbon atoms at the same time; and
 10 mixing the obtained triflate and a tertiary amine represented by the following formula III in an appropriate organic solvent:

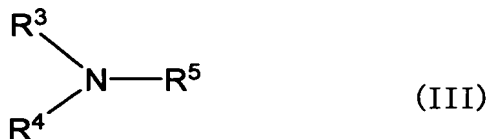


15 wherein one or two of R^3 , R^4 and R^5 are methyl groups, and the remaining R^3 , R^4 and R^5 are each independently $-CH_2COO \cdot C_nH_{2n+1}$, $-C_nH_{2n+1}$, or $-C_6H_4 \cdot p \cdot C_nH_{2n+1}$, where n is an integer of 6 to 20, and $-C_nH_{2n+1}$ is linear.

20 5. A method for producing a 1,3,5-triazine compound represented by the following formula I'':



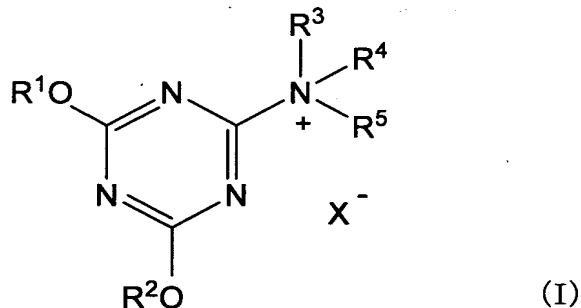
having 6 to 20 carbon atoms, but both R¹ and R² are not alkyl groups having 6 to 20 carbon atoms at the same time; and X is a halogen atom;



wherein one or two of R³, R⁴ and R⁵ are methyl groups, and the remaining R³, R⁴ and R⁵ are each independently -CH₂COO·C_nH_{2n+1}, -C_nH_{2n+1}, or -C₆H₄·p·C_nH_{2n+1}, where n is an integer of 6 to 20, and -C_nH_{2n+1} is linear.

6. A method for producing a carboxylic acid derivative, comprising:

mixing a carboxylic acid and a compound having a nucleophilic functional group in an aqueous solution in the presence of a 1,3,5-triazine compound represented by the following formula I:



wherein R¹ and R² are each independently a methyl group, an ethyl group, a hydroxyalkyl group having 2 to 5 carbon atoms, -(CH₂CH₂O)_mR⁶ (where m is an integer of 1 to 120, and R⁶ is a hydrogen atom, a methyl group, an ethyl group, or a propyl group), -(CH₂CH₂NR⁷)_mH (where m is an integer of 1 to 120, and R⁷ is an alkyl group having 2 to 5 carbon atoms, an N,N-dialkylaminoethyl group or -CH₂CH₂N⁺(CH₃)₃), -CH₂CH₂SO₃⁻, -CH₂CH₂N⁺(CH₃)₃, or an alkyl group having 6 to 20 carbon atoms, but both R¹ and R² are not alkyl groups

having 6 to 20 carbon atoms at the same time; one or two of R^3 , R^4 and R^5 are methyl groups, and the remaining R^3 , R^4 and R^5 are each independently $-CH_2COO-C_nH_{2n+1}$, $-C_nH_{2n+1}$, or $-C_6H_4-p-C_nH_{2n+1}$, where n is an integer of 6 to 20, and $-C_nH_{2n+1}$ is linear; and X^- is a halide ion, a
5 triflate anion, a nitrate ion, a sulfate ion, a hydrogensulfate ion, a sulfonate ion, a tetrafluoroborate ion, or a perchlorate ion.

7. The method of claim 6, wherein the carboxylic acid is a fatty acid having 6 to 20 carbon atoms.

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8. The method of claim 7, wherein the carboxylic acid is a fatty acid having 8 to 18 carbon atoms.

9. The method of any of claims 6 to 8, wherein at least one of R^1 and R^2
15 in the formula I is a methyl group or an ethyl group.

10. The method of any of claims 6 to 9, wherein n in the formula I is 12 to 16.

20 11. The method of any of claims 6 to 10, wherein the compound having a nucleophilic functional group is a primary amine compound or a secondary amine compound.

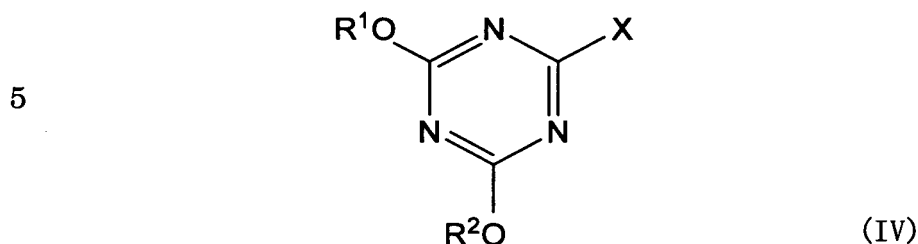
12. A method for producing a carboxylic acid derivative, comprising
25 mixing:

a carboxylic acid;

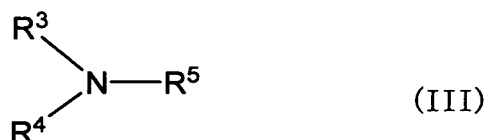
a compound having a nucleophilic functional group;

a compound represented by the following formula IV; and

a tertiary amine represented by the following formula III in an aqueous solution:



wherein R¹ and R² are each independently a methyl group, an ethyl group, a hydroxyalkyl group having 2 to 5 carbon atoms,
10 $-(\text{CH}_2\text{CH}_2\text{O})_m\text{R}^6$ (where m is an integer of 1 to 120, and R⁶ is a hydrogen atom, a methyl group, an ethyl group, or a propyl group),
 $-(\text{CH}_2\text{CH}_2\text{NR}^7)_m\text{H}$ (where m is an integer of 1 to 120, and R⁷ is an alkyl group having 2 to 5 carbon atoms, an N,N-dialkylaminoethyl group or
 $-\text{CH}_2\text{CH}_2\text{N}^+(\text{CH}_3)_3$, $-\text{CH}_2\text{CH}_2\text{SO}_3^-$, $-\text{CH}_2\text{CH}_2\text{N}^+(\text{CH}_3)_3$, or an alkyl group
15 having 6 to 20 carbon atoms, but both R¹ and R² are not alkyl groups having 6 to 20 carbon atoms at the same time; and X is a halogen atom,



20 wherein one or two of R³, R⁴ and R⁵ are methyl groups, and the remaining R³, R⁴ and R⁵ are each independently $-\text{CH}_2\text{COO}-\text{C}_n\text{H}_{2n+1}$, $-\text{C}_n\text{H}_{2n+1}$, or $-\text{C}_6\text{H}_4\text{-p-C}_n\text{H}_{2n+1}$, where n is an integer of 6 to 20, and $-\text{C}_n\text{H}_{2n+1}$ is linear.

25 13. The method of claim 12, wherein the carboxylic acid is a fatty acid having 6 to 20 carbon atoms.

14. The method of claim 13, wherein the carboxylic acid is a fatty acid having 8 to 18 carbon atoms.
15. The method of any of claims 12 to 14, wherein at least one of R^1 and R^2 in the formula I is a methyl group or an ethyl group.
16. The method of any of claims 12 to 15, wherein n in the formula III is 12 to 16.
17. The method of any of claims 12 to 16, wherein the compound having a nucleophilic functional group is a primary amine compound or secondary amine compound.
18. The method of any of claims 12 to 16, wherein the compound having a nucleophilic functional group is an alcohol compound.